



# Urgency of Climate Change, New Research Emerges at MIT Forum

By Noah Spies  
STAFF REPORTER

A sense of urgency pervaded Monday's clean energy forum, which was sponsored by the MIT Energy Initiative and featured a who's who of energy and climate change policy. The forum was moderated by Rep. Edward Markey (D-Mass.), who is co-authoring legislation designed to tackle technologically and politically difficult global warming

and clean energy issues.

The forum featured a presentation by John Holdren '65, director of the White House Office of Science and Technology Policy. Holdren noted that the rate of global warming continues to outpace predictions, including those made within a 2007 report by the Intergovernmental Panel on Climate Change.

As a student at MIT in the 1960s, Holdren was inspired by the race to

put a human on the moon. However, he said that the U.S. and the world face a far greater task in reducing human greenhouse gas emissions to levels that would avoid catastrophic climate changes.

In his presentation, Holdren outlined a number of cost-effective measures that could reduce carbon-dioxide emissions.

Markey noted that his bill would support the realization of many of these measures by spurring energy-efficient retrofits of existing buildings and increasing efficiency in energy utilities.

Markey also emphasized the role research would play in further achieving these goals and highlighted the MIT spinoff company A123 Systems, which aims to dramatically improve the efficiency of existing batteries.

The forum also featured Daniel Yergin, Chairman of Cambridge Energy Research Associates and a Pulitzer Prize-winning author, as well as Prof. Ernest Moniz, Director of the MIT Energy Initiative.

Wrapping up the event was the keynote by Carol Browner, former head of the Environmental Protection Agency under President Clinton and assistant to President Obama on energy and climate change. Brown-

Clean Energy, Page 10

## Alum Will Fix Hubble For the Last Time

By Dennis Overbye  
THE NEW YORK TIMES

HOUSTON

John Grunsfeld '80 was sitting in an astronomical meeting in Atlanta in January of 2004 when he got a message to come back to headquarters in Washington to talk about the Hubble Space Telescope.

To say that he was excited would be an understatement. As an astronaut, Grunsfeld had twice journeyed to space to make repairs on humanity's most vaunted eye on the cosmos, experiences he had described to a high-level panel pondering Hubble's fate only a few months before as the most meaningful in his life. He was looking forward to leading the third and final servicing mission, which had been delayed by the loss of the shuttle Columbia and its crew the year before.

Thinking that the mission was now being scheduled, Grunsfeld raced to Washington, only to learn that Sean O'Keefe, NASA's administrator, had canceled it on the ground that it was too risky. Wearing his other hat as NASA's chief scientist, Grunsfeld now had the job of telling the world that the space agency was basically abandoning its greatest scientific instrument at the same time that it was laying plans for the even riskier and more expensive effort to return humans to the Moon.

He said he felt as if he had been hit by a two-by-four.

"Being an astronaut, there are not a lot of things that have really shocked me in my life," Grunsfeld

# Students Abduct Tim The Beaver, Demand Sports Teams Spared

By Shreyes Seshasai  
CONTRIBUTING EDITOR

and shouted their demands to the surprised crowd.

The student who was playing Tim was immediately released unharmed.

The organizers of Athletics Weekend, along with the student playing Tim himself, were not aware of the planned kidnapping, according to the kidnappers.

The demands (see note, page 10) were simple: have the voice of the students heard, and find a way to keep all 41 varsity sports at MIT for at least another year.

Julie Soriero, director of athletics, expressed some challenges that teams would face if the cuts were in fact delayed a year. Among those was the concern that freshmen may not want to join a team that will be cut at the end of the year.

"Freshmen may be vital to field a full team," she said.

To the kidnappers, however, one additional year would mean a lot or, at least, make the cuts more tolerable.

"It'd be hard for the players on those teams to think, 'I've played in my last season,'" explained one of the kidnappers.

Delaying the cuts for a year is "not for the freshmen," said Catherine Melnikow '10, chair of the Undergraduate Association Committee on Athletics. "It's for the returning athletes."

Soriero also mentioned a concern that high staff turnover would result from a one-year delay, jeopardizing the leadership of the program.

Julie C. Andren '10, chair of the Student Athletics Advisory Committee, thinks this is less of a concern. "If it were me, I'd prefer the extra year to find a new job."

The beaver costume is managed

**Tim the Beaver**, Page 10

## In Short

¶ The faculty will move to simplify the humanities degree requirement by eliminating the humanities, arts, and social sciences distribution (better known as HASS-D) at the faculty meeting tomorrow (Wed., 10-250, 3:30 p.m.). The faculty will vote next month on the proposal to be introduced tomorrow, which would replace the HASS-D requirement with a simpler three-category distribution. Freshmen starting in fall 2010 or fall 2011 would be affected. The meeting is open to all. See <http://libraries.mit.edu/faculty-minutes>.

¶ Federal and state taxes must be postmarked by Wed., April 15. The Fort Point Station post office, by South Station, is open until midnight.

¶ John M. Deutch '61 is 70! The Institute Professor is being feted all afternoon on Thu. from 2-5 p.m. in 10-250. Speakers include former Secretaries of Defense James Schlesinger and Harold Brown; Brent Scowcroft, former National Security Advisor; John Podesta, former White House Chief of Staff; as well as Philip Deutch, Linda Stuntz, and George Whitesides. The event commemorates Deutch's 70th birthday; he was born July 27, 1938.

¶ Know your Term Regulations. The UA reminds you no tests may be given after May 8. Classes with finals may not give assignments due after that date. Report violations to <http://ua.mit.edu/violations>.

¶ 2001: A Space Odyssey is being shown for free on Wed. at 7 p.m. in 26-100, as part of Course XVI's Giant Leaps celebration of the 40th anniversary of the Apollo moon landings. The landing was July 20, 1969. A new 35mm print is being shown.

Send news information and tips to [news@the-tech.mit.edu](mailto:news@the-tech.mit.edu).



NOAH SPIES—THE TECH

John P. Holdren '65 (left), director of the White House Office of Science and Technology Policy, delivered a presentation as part of Monday's forum on clean energy. The forum, sponsored by the MIT Energy Initiative, was chaired by Rep. Edward J. Markey (D-Malden, right) and featured President Obama's assistant for energy and climate change and former EPA administrator, Carol M. Browner (not pictured).

## ASA Election Results

President	Rachel E. Meyer '10*
Treasurer	Keone Hon '11*
Secretary	Paul D. Baranay '11*
Graduate Member at Large	Zhao Chen G*
Graduate Member at Large	Leslie C. Dewan G
Undergraduate Member at Large	Nicole D. Teague '11
Undergraduate Member at Large	Tony J. Valderrama '11
Student Member at Large	Matthew Goldstein '09

\* Incumbent ASA Executive Board member.

The Association of Student Activities elected officers for the 2009–2010 term at their General Body Meeting last night in 34-101. Current ASA member Rachel E. Meyer '10 defeated Jessie Q. Li '10 by a landslide for President. Current president Keone Hon '11 defeated Li and Nicole D. Teague '11 in the election for Treasurer. Secretary and Graduate Member elections were unopposed.

Teague, Valederrama, and Goldstein defeated Rebecca E. Krentz-Wee '12, Andrea Robles '10 (a Tech photography editor), and Li. Li and Robles were eliminated early, with Krentz-Wee coming in a close third.

The ASA meeting did not transact other significant business, other than to remind student groups to update their ASA database entries, and to announce that assignments for the Campus Preview Weekend Activities Midway would be out soon; they have been delayed because of the illness of an ASA Executive Board member.

## MONDAY'S BIG SCREW TOTALS

Candidate	Charity	Amount
Chancellor Philip L. Clay PhD '75	Local homeless shelter	\$20.36
Pierre F. J. Lermisiaux (2.005)	American Cancer Society	\$10.99
Dan Frey (2.007)	United Cerebral Palsy Ass'n	\$5.25
Richard D. Berlin III (Campus Dining)	Project Bread	\$4.69
David W. Miller (Course 16)	AIDS Action Committee	\$4.36
Albert R. Meyer (6.042)	MIT Community Service Fund	\$2.16
Richard M. Dudley (18.440)	Jimmy Fund	\$2.00
Karen A. Nilsson (Residential Life)	Project Bread	\$2.00
Christopher C. Cummins CM '93 (5.03, 5.05)	Save the Harbor, Save the Bay	\$1.46
Anette Hosoi (2.001, 2.006)	To be determined	\$1.00
Tong Chen (Course 21F)	To be determined	\$0
Alexander Mitsos (Course 2)	Big Sisters Boston	\$0
Total		\$54.20

Alpha Phi Omega (APO)'s annual Institute Screw fundraiser runs this week from 10 a.m. to 5 p.m. in Lobby 10. APO accepts donations of loose change in glass jars to candidates who students "feel have screwed them over the most." The proceeds go to the winner's selection of charity, and the winner claims possession of a four-foot long left-handed aluminum screw for the year. Last year's contest raised upwards of \$1,500, and 2007's raised \$2,919.

## CAMPUS LIFE

Proehl interviews Prof.

Gregory Fu '85

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Numbers and sex

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# WORLD & NATION

## A Nervous Industry Finds Hostility at Auto Show

By David Segal

THE NEW YORK TIMES

Just a year ago, working as a product presenter at an auto show was a pretty straightforward job. You stood next to a vehicle, you called it a marvel of engineering, style and comfort and then you fielded softball questions like, "What does this baby cost?"

But that was before the bailout. Now that the government has helped General Motors and Chrysler stave off bankruptcy with billions of dollars in loans, these companies are finding somewhat hostile crowds at their exhibits at the New York International Auto Show.

Donald Han, an accountant from Queens, sounded unmoved. "Why now?" he asked the woman, rather curiously, once she had finished her patter. "How come you've got to nearly go bankrupt before you come out with a car like this?"

It does not seem to matter that these women — they are nearly all women, most of them young and attractive — work part-time for marketing firms and talent agencies with contracts to staff the exhibits. Many know little about the car companies they are shilling for beyond the scripts they have memorized.

"I try to explain that we're not involved in corporate decisions, so complaining to us doesn't really make a lot of sense," said Kerri Moss, standing on a large turntable next to a Jeep 4 X 4 Laredo, a Chrysler product. Recently laid off from her job as a teacher, she is trying to earn some money on the car-show circuit, which runs from September to May. "And if that doesn't work, I tell them we're doing the best we can."

## Mortars Threaten U.S. Congressman's Plane in Somalia

By Mohamed Ibrahim

THE NEW YORK TIMES

MOGADISHU, SOMALIA

Rep. Donald M. Payne, the chairman of the House subcommittee on Africa, narrowly escaped a mortar attack on Monday as he was ending a visit to Mogadishu, Somalia's bullet-ridden capital, that he undertook against the advice of the Obama administration.

Just a day after U.S. military snipers killed three Somali pirates and freed a kidnapped sea captain, eliciting vows of revenge from pirates and other Somalis, several mortar rounds exploded in the vicinity of Payne's plane as it was taking off from Mogadishu for Nairobi, Kenya. At least 10 civilians were wounded in the explosions.

The congressman, a Democrat from Newark, N.J., was unhurt and it was unclear if insurgents who routinely shell the airport were trying to hit his plane or were simply unleashing another assault on the city's main lifeline.

The Shabab, an Islamist insurgent group vying for control of the country, later took responsibility for the attack, Reuters reported.

## Amazon Ranking Errors Ignite A Twitter-Fed Outrage

By Motoko Rich

THE NEW YORK TIMES

In response to nearly two days of angry online commentary, particularly on Twitter, Amazon.com said on Monday that "an embarrassing and ham-fisted cataloging error" had caused thousands of books on its site to lose their sales rankings and become harder to find in searches.

Most of the company's online critics complained that the problem appeared to have a disproportionate effect on gay- and lesbian-themed books, leading to cries of censorship.

The titles that lost their sales rankings during the weekend included James Baldwin's "Giovanni's Room," the gay romance novel "Transgressions" and "Unfriendly Fire," a recently published book about the government's policies on gays in the military.

## Stormy Down South, Dry Up North

By Vince Agard

STAFF METEOROLOGIST

Severe weather has been wreaking havoc in the southeastern United States over the past few days. Over the weekend, severe thunderstorms caused widespread power outages, toppled trees, and spawned tornadoes as they carved a path through parts of Alabama, Georgia, Tennessee, Arkansas, and the Carolinas. Widespread damage and flooding was reported as were several deaths and injuries. The region was then battered by another storm system on Monday, with strong winds, heavy rain, and hail reported across Alabama, Georgia, Tennessee, Kentucky, and Florida. More severe weather was expected at the time of this writing Monday night, with severe thunderstorm and tornado watches posted by the National Weather Service across the Southeast.

While spring is a peak time for severe weather in areas of the southeastern United States, severe storms occur much more rarely in the Northeast this time of year. The weather systems currently producing severe weather in the South will steer clear of the New England region, and the area will stay dry for the rest of the week. Periods of clouds and sun can be expected through mid-week. While today's high will be about 53°F, temperatures will struggle to reach the 50s°F through Thursday. Finally, a weekend warm-up will bring sunny skies and temperatures in the 60s°F.

### Extended Forecast

**Today:** Partly cloudy and calm, High 53°F (12°C)  
**Tonight:** Mostly clear, Low 37°F (3°C)  
**Tomorrow:** Partly sunny, High 49°F (9°C)  
**Thursday:** Sunny, Highs around 50°F (10°C)  
**Friday:** Sunny, Highs in the mid 60s°F (18°C)

# Militants Joining Forces To Advance Into Pakistan

By Sabrina Tavernise

THE NEW YORK TIMES

DERA GHAZI KHAN, PAKISTAN

Taliban insurgents are teaming up with local militant groups to make inroads in Punjab, the province that is home to more than half of Pakistanis, reinvigorating an alliance that Pakistani and American authorities say poses a serious risk to the stability of the country.

The deadly assault in March in Lahore, Punjab's capital, against the Sri Lankan cricket team, and the bombing last fall of the Marriott Hotel in Islamabad, the national capital, were only the most spectacular examples of the joint campaign, they said.

Now police officials, local residents and analysts warn that if the government does not take decisive action, these dusty, impoverished fringes of Punjab could be the next areas facing the insurgency. American intelligence and counterterrorism officials also said they viewed the developments with alarm.

"I don't think a lot of people understand the gravity of the issue," said a senior police official in Punjab, who declined to be named because he was discussing threats to the state.

"If you want to destabilize Pakistan, you have to destabilize Punjab."

As American drone attacks disrupt Taliban and Qaida strongholds in the tribal areas, the insurgents are striking deeper into Pakistan — both in retaliation and in search of new havens.

Tell-tale signs of creeping militancy abound in a belt of towns and villages near here that a reporter visited last week. Militants have gained strength considerably in the district of Dera Ghazi Khan, which is a gateway both to Taliban-controlled areas and the heart of Punjab, police and local residents say. Many were terrified.

Some villages, just north of here, are so deeply infiltrated by militants that they are already considered no-go zones by their neighbors.

In at least five towns in southern and western Punjab, including the mid-sized hub of Multan, barber shops, music stores and Internet cafes offensive to the militants' strict interpretation of Islam have received threats. Folk ceremonies have been halted in some areas. Hard-line ideologues have addressed large crowds to push their idea of Islamic revolution. Sectarian attacks, dormant here since the 1990s, have erupted once

again.

"It's going from bad to worse," said a senior police official in Dera Ghazi Khan. "They are now more active. These are the facts."

American officials agreed. Bruce Riedel, who led the Obama administration's recently completed strategy review of Pakistan and Afghanistan, said that the Taliban now has "extensive links into the Punjab."

"You are seeing more of a coalescence of these militant groups," said Riedel, a former CIA official. "Connections that have always existed are becoming tighter and more public than they have in the past."

The Punjabi militant groups have had links with the Taliban, who are mostly Pashtun tribesmen, since the 1980s. Some of the Punjabi groups are veterans of Pakistan's state-sponsored insurgency against Indian forces in Kashmir. Others made targets of Shiites.

Under pressure from the United States, former President Pervez Musharraf cut back state support for the Punjabi groups. They either went underground or migrated to the tribal areas, where they deepened their ties with the Taliban and al-Qaida.

## Strife Swells In the Streets of Bangkok

By Seth Mydans  
and Thomas Fuller

THE NEW YORK TIMES

BANGKOK, THAILAND

Soldiers armed with assault rifles fought running street battles with anti-government protesters in Bangkok on Monday as unrest spread through a wider swath of the city, and the chief of Thailand's armed forces vowed to use "every means to end the chaos."

Two people were killed and more than 113 people were wounded in the clashes, according to hospital officials. Among the wounded were 23 security officers and other government personnel.

Major shopping malls shut their doors, foreign governments advised their citizens in Bangkok, the capital, to stay inside and the government banned the sale of gasoline in the center of the city in an effort to

stop protesters from making Molotov cocktails.

"We will not use weapons unless it is necessary to defend ourselves," said the supreme commander of Thailand's armed forces, Gen. Songkitti Jaggabatara. "We will not use them excessively."

By late evening, security forces had cleared most major intersections, and the protesters were facing off against army and police units in the streets around the prime minister's office. Hundreds of pro-government vigilantes armed with machetes and clubs were also in the area.

In a separate clash earlier Monday, soldiers fired shots from automatic rifles and tear gas at protesters gathered at a major intersection leading out of the city; the demonstrators answered with gasoline bombs.

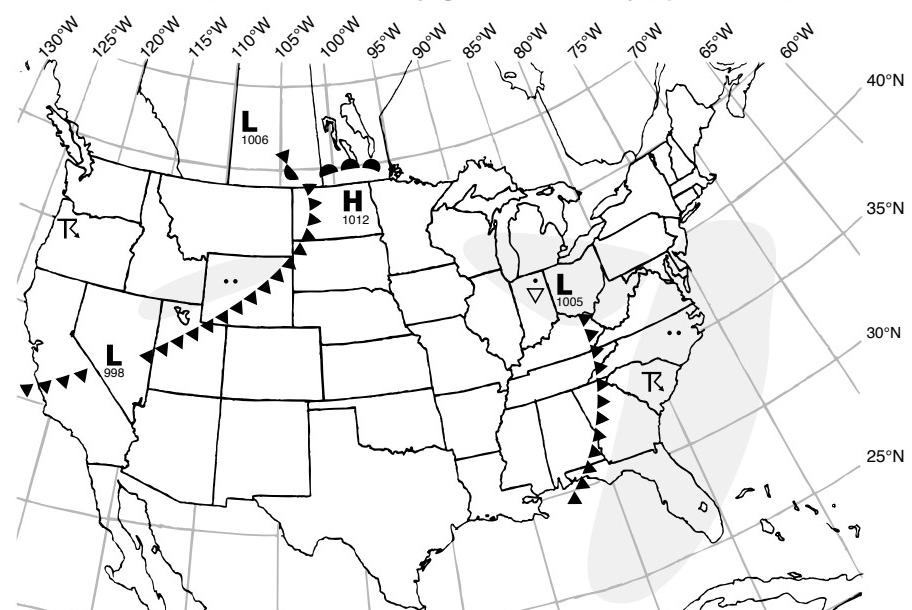
The gunfire appeared to be aimed into the air above the protesters, but hospitals reported that more than 70 of them were injured, many from the tear gas. Some news reports said that two demonstrators and two soldiers had been shot and wounded.

The violence came on what is normally a day of animated celebration, the New Year's water festival. Street parties and revelry continued in some Bangkok neighborhoods untouched by the strife, but the center of the city remained tense. At least a dozen streets were barricaded by protesters, many of whom were armed with clubs and slingshots.

In a televised address, Prime Minister Abhisit Vejjajiva sought to reassure the nation that the government was carrying out a "step-by-step process to restore order and stop the violence."

# WEATHER

Situation for Noon Eastern Daylight Time, Tuesday, April 14, 2009



Weather Systems	
H	High Pressure
L	Low Pressure
§	Hurricane

Weather Fronts	
—	Trough
—	Warm Front
▲	Cold Front
—	Stationary Front

Precipitation Symbols	
Snow	Rain
*	•
▽	▽
Light	*
Moderate	**
Heavy	***

Other Symbols	
≡	Fog
RK	Thunderstorm
∞	Haze

Compiled by MIT Meteorology Staff and *The Tech*

# U.S. May Drop Key Condition For Iran Talks

By David E. Sanger

THE NEW YORK TIMES

WASHINGTON

The Obama administration and its European allies are preparing proposals that would shift strategy toward Iran by dropping a long-standing American insistence that Tehran rapidly shut down nuclear facilities during the early phases of negotiations over its atomic program, according to officials involved in the discussions.

The proposals, exchanged in confidential strategy sessions with European allies, would press Tehran to open up its nuclear program gradually to wide-ranging inspection. But the proposals would also allow Iran to continue enriching uranium for some period during the talks, a sharp

## Goldman's Profit Topped Forecast; Share Sale Planned

By Louise Story

THE NEW YORK TIMES

Six months after accepting a financial lifeline from Washington, a newly profitable Goldman Sachs is pushing to return the billions of taxpayer dollars that it received in an effort to extricate itself from heightened government control.

Goldman, which rode out the final, tumultuous months of 2008 with the help of a federal rescue, reported strong quarterly profits on Monday and said that it would seek to raise money in the capital markets to repay the government.

If successful, Goldman would become the first major bank to return funds received under the Troubled Asset Relief Program, or TARP. Such a step would probably enable Goldman — long one of the most lucrative places to work on Wall Street

# Smile!

Who knows what you'll find peeking out from behind the door here in the southeast corner of the Student Center! Learn what goes on behind the scenes at MIT's oldest and largest newspaper and find out how you can become a part of making the news happen. Check out these and other events this weekend at our office, room W20-483.

### The Tech's Open Newsroom

Thursday, April 16, 4:00 p.m.–11:00 p.m.

Come watch our veteran reporters and editors in action as we put together Friday's issue of *The Tech*.

### Meet the Tech Photographers

Friday, April 17, 4:00 p.m.–6:00 p.m.

Don't settle for a point and shoot. Capture that perfect moment when a batter hits a home run, when a break dancer busts a move, when the piano drops. Learn how to use *The Tech*'s state of the art photography equipment with our experienced staff.

### How It's Made: The News

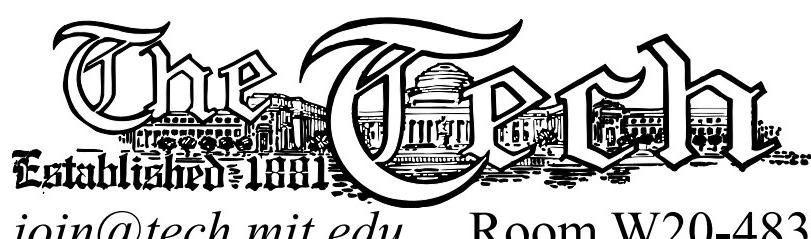
Saturday, April 18, 3:30 p.m.–5:30 p.m.

Ever wonder where the news comes from? *The Tech*'s news editors pull back the curtain from how the news is made. Along the way, we'll highlight some of journalism's triumphs (and blunders).

### Rock Out with *The Tech*

Saturday, April 18, 7:00 p.m.–9:00 p.m.

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[join@tech.mit.edu](mailto:join@tech.mit.edu) Room W20-483

break in the approach taken by the Bush administration, which had demanded that Iran halt its enrichment activities.

The proposals under consideration would go somewhat beyond President Barack Obama's promise, during the presidential campaign, to open negotiations with Iran "without preconditions." Officials involved in the discussion said they were being fashioned to draw Iran into nuclear talks that it had so far shunned.

A review of Iran policy that Obama ordered after taking office is still under way, and aides say it is not clear how long he would be willing to allow Iran to continue its fuel production, and at what pace. But European officials said that in talks with Obama

and his aides during his trip to Europe, there was agreement that Iran would not accept the kind of immediate shutdown of its facilities that the Bush administration had demanded.

"We have all agreed that is simply not going to work — experience tells us the Iranians are not going to buy it," said a senior European official involved in the strategy sessions with the Obama administration. "So we are going to start with some interim steps, to build a little trust."

Administration officials declined to discuss details of their confidential deliberations, but said that any new American policy would ultimately require Iran to cease enrichment, as demanded by several U.N. Security Council resolutions.

— to free itself from government-imposed restrictions on compensation.

Many analysts welcomed the news as the latest in a series of signs that the financial industry is stabilizing. But others warned of a looming divide between a handful of banks like Goldman, which may be strong enough to return their TARP money, and the many others that are too weak to go without government funds.

It is unclear how quickly Goldman, which was also a beneficiary of a separate government rescue of the American International Group, might be allowed to return the \$10 billion it accepted last October. While Goldman's latest results bolster its case for untangling itself from TARP, federal regulators are nonetheless concerned about the health of the broader financial industry and the

issue is really, will the government give Goldman special dispensation to get out first?" said Brad Hintz, an analyst at Sanford C. Bernstein. "Goldman can walk the halls of Congress waving a check, but is it in the best interest of the marketplace for them to pay it back?"

Goldman indicated in early February that it would seek to repay the funds, and since then, several other banks have said they would like to do the same. Not all banks, however, are likely to bounce back as quickly as Goldman, despite expectations that other banks will report strong results for the first quarter.

Goldman announced profits of \$1.66 billion in the quarter, marking a strong comeback from a loss in late 2008.

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## Alumni Reaction to Sports Cuts

nity.

It also added structure to my schedule, something I very much needed. And arriving at my dorm physically spent at the end of each day gave me the calmness I needed to spend the evening working on my studies — for me personally the vigorous exercise was a critical and essential need, though initially I lacked that perspective.

Of course I could have achieved the benefits of community, structure, and vigorous exercise via another sport. The point is that without a doubt I would not have done so.

Every person is different, and the unique aspects of gymnastics were a match for me, a benefit of the richness of diversity of MIT's offerings. A wider range of sports engages a wider range of individuals. To me, that is what MIT is about — being immersed in an incredibly diverse group of people, all seeking excellence but vastly different from each other.

And to both attract and engage that population requires a wide range of offerings, not only academically, but in sports and other extra-curricular activities as well.

The minority experience is just as important as the majority's. To lose MIT gymnastics (and other "marginal" sports) would be cutting out a vital part of that richness of offerings, the diversity that to me defines the excellence of MIT.

Andy Rubel '75

## More Reaction...

Hello Professor Columbo et al,

This is Tom Hafer '70. I have heard that budget considerations are driving decisions that are likely to result in elimination of "lesser" varsity sports such as gymnastics. I have supported the athletic department with my contributions over the years and lately I have provided specific support to the gymnastics team. I would be greatly disappointed if gymnastics

were eliminated as a varsity sport.

I was one of the members of the group that founded the varsity program at MIT when it transitioned from club status in 1967. We formed a strong team that won most of our matches and, I hope, brought credit upon MIT and perhaps persuaded a few high-schoolers to come to MIT to try out its wide diversity of sports opportunities. I went to Nationals three times, coming in 12th on rings in 1968, and I was awarded a Straight T upon graduation.

Needless to say, I have fond memories of my gymnastics days but my feelings go beyond that. MIT can be a stressful place, but gymnastics, track, and the many intramural sports I participated in allowed me to forget my problems at least temporarily, and I emerged healthier and saner for it. Gymnastics is a sport where you can build capabilities in a continuous and linear manner and be proud of what you have accomplished while looking ahead to where you plan to go. There are no opportunities to pursue gymnastics after college, so I would have missed the experience altogether if it were not available at MIT.

I understand that gymnastics has a large "footprint" in terms of equipment and floor-space, and requires special coaching skills. But in my view, it is worth it. If MIT could afford a gymnastics team in 1967 when tuition was \$1950 per year and the endowment was a small fraction of its current value, it is hard to imagine that it is unaffordable today. One thing is certain — once it is gone, it will not come back when better times return.

I have supported MIT for many years. I helped organize the "Pi-athelon" that has contributed thousands of dollars to MIT. If funding needs to be cut, I can suggest several places where savings can be made that would have a far less negative impact on MIT than cutting gymnastics. I would ask that MIT support my request to retain men's and women's gymnastics at MIT.

Tom Hafer '70



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# A Research System Set Up to Fail

*What Happens to People When Research Bets Don't Pay Off?*

Gary Shu

Thomas Friedman has a solution to fix the global energy problem and boost the economy. In his latest book, *Hot, Flat and Crowded*, Friedman presents it succinctly: "We need 100,000 people in 100,000 garages trying 100,000 things — in the hope that five of them break through."

When I hear about these kinds of ideas for entrepreneurship and research that we, as young businesspeople and engineers, are expected to do, I just wonder: what about the 99,995 people that fail?

Yes, I believe and understand the theory — the country need more research in more varied subjects in order to produce those diminishing marginal returns on new technology advancements. There may be few genuine breakthroughs and more incremental advances these days, but the true innovations are so large they make up for all the losses. These breakthroughs can be so great — the Internet, a cure for cancer, cheap renewable energy — that they transform our entire way of life for the better. May glory be heaped upon those who bring them unto us.

But what, Mr. and Mrs. Policymakers, if we don't want to be part of the hoards of people who don't succeed?

There are people out there convincing us — the graduate students that do research right now — to do things that will fail. Thomas Friedman has said as much in his twice-weekly column in the *New York Times* where he can hammer the idea into our heads. Politicians routinely trum-

pet the alarmism that we don't have enough scientists and engineers to do our research.

According to these shameless boosters, someone else is always supposed to do the work. The politicians say the academics are supposed to do it. The academics say the scientists are. The scientists call on the engineers. And all of the older folk are waiting for the next generation of science and engineering students to rise up and save the world with technology produced from research labs.

What such a research policy lacks an awareness of is that no one wants to fail. We all want ourselves to succeed and someone else not to. Failing hurts, especially if you have a family and a mortgage to feed.

If we're going to institute a massive (insert your tech here — energy, biotech, pharma, space, etc) research initiative, we need some way of supporting those that fail. We need jobs available for these people to have stable careers instead of squeezing the best years of their life out of grad school and dumping them to a research lab under the thumb of government funds or to tinker in one of Friedman's garages praying for that big breakthrough. One possibility for supporting such research infrastructure is a greatly expanded network of federally supported research institutions.

We made the mistake once during the decline of the space race. In the wake of Sputnik's launch during the Cold War, America launched its science education programs to feed into defense and space spending. When these programs became less of a priority, we saw the stomach-churning images of physics PhDs

driving taxi cabs during the late 70s.

The country is in a similar situation now with energy research. The administration is looking to increase energy research spending by an order of magnitude with little thought to implementation and supporting the researchers. Meanwhile, think tanks and columnists cheer them on while politicians give their assent.

But what happens in a prolonged recession with rock bottom energy prices? Funding gets axed, business models collapse, and we — the students who drank the Kool-Aid — are back on the streets. This is what happened in the 70s. The situation may indeed be different now because of the emergence of developing nations and the BRIC (Brazil, Russia, India, China) countries, but the past offers a relevant and cautionary tale that's discussed surprisingly little.

The organizers of Power Shift 2009 — a Washington DC summit/protest to prevent climate change through renewable energy — complained recently that there was a conspicuous lack of young scientists, engineers and entrepreneurs. Is it any surprise that scientists and engineers aren't as excited as those who merely champion research? I hypothesize that it's because we're the ones who truly know how difficult the path is toward the goals talked about. When I'm trying to figure out whether it's a good bet, the last thing I want is some dumb, powerful politician cheerleader standing on the sidelines yelling in my ear to go for it.

Entrepreneurship works on a similar principle, but it is self-selecting for people willing to do something that may fail. Government and academic labs concern themselves with more

basic research, further from commercialization, and safer bets for those involved. For young scientists and engineers, the people who go into grad school, science and engineering expect to work on topics that succeed. They are told they are ostensibly training for narrow academic careers. But even superstar grad students have a tough time climbing up that ladder, and there are far fewer teaching positions than graduates. According to these supporters of research, those who don't make it are supposed to go into these risky start-ups.

Some people don't just want a job though. They need stability and job satisfaction. Working 40 years of a career on incremental research technology improvements that never see the light of day is not my idea of a fulfilling life. The alternative, taking inherently risky bets on unproven technologies, is just as unappealing.

Yet, this is what we can read between the lines of those that promote massive research investments. Taking such recommendations to their logical conclusion, there will be thousands and millions of such careers.

It's a reasonable question isn't it? Why should so many young students work in research when the likely success is elsewhere? Until the likes of Friedman and our nation's leading policymakers actually think through the implications of their ideas, I can say without reservation to the best and brightest — stay away.

Excuse us if we're the only ones left who can do the math.

*Gary Shu is a graduate student in the Technology and Policy Program and the Department of Urban Studies and Planning.*

# The Dalai Lama Supports a Unique Opportunity

*A Case for the Center for Ethics*

Kai-yuh Hsiao

At the end of this month, a host of influential people will be coming to MIT to speak at the opening of the Dalai Lama Center for Ethics and Transformative Values at MIT. The opening event will be headlined by the Dalai Lama and influential composer Philip Glass. The speakers cover a wide range of disciplines, including ethics, political science, environmental policy, psychology, neuroscience, economics, music, theater, religion, and spirituality. The educational focus of the Center for Ethics is to be similarly multidisciplinary.

I'd like to explain why the opening of the Center is critically important for MIT, and why the support of both MIT and the Dalai Lama is vital for MIT to derive the most benefit from the Center's existence.

As our world becomes increasingly interconnected, future leaders need access to more than

just the skills necessary for technical and managerial leadership. Awareness of the larger global landscape and of the far-reaching impact of every decision will provide leaders with the resourcefulness, the wisdom, and the social responsibility to build stable, sustainable enterprises. As a top-tier university, it is in MIT's interests to provide its students with access to such awareness.

The Center for Ethics is intended to promote this global, multi-disciplinary perspective. As a technology-focused school, MIT trains students primarily for technical leadership, to create innovations that make the world a better place. However, truly great technical leaders guide their organizations to sustainable success by also being aware of how their innovations impact other aspects of life around the world, and to balance technology-centered improvement against any potential costs to culture, economy, and environment.

This is not meant to discourage innovation or progress, but to initiate dialogue and to pro-

vide awareness of the complex interactions between disciplines. The hope is to enable people to choose principles for themselves that allow them to select the best innovations to pursue in a balanced manner. Ideally, this balance will enable individual leaders to not only succeed in the short-term, but also to assist each other in building a more sustainable world, socially and environmentally. MIT's support for the Center for Ethics is a critical step in supporting such awareness, both for the sake of its students and for the sake of the world.

Having the support and the name of both MIT and the Dalai Lama is another key component of promoting this awareness. Nobody doubts that MIT excels at science, technology, and all things intellectual, and can thus bring the finest technical minds together to improve the state of the world. What the Center for Ethics adds to this is the clout to add highly-regarded experts in non-technical fields to the discussion. Having the Dalai Lama's support and name allows the Cen-

ter, and thus MIT, to engage with a larger selection of highly-regarded policymakers, spiritual leaders, and influential thinkers. Likewise, having the direct support of three Nobel Peace Prize winners — the Dalai Lama, Desmond Tutu, and Betty Williams — brings further credibility and makes it clear that the theme of this effort is to encourage sustainability and coexistence. This confluence of minds will provide students with opportunities to join in dialogue with leaders and thinkers from all fields.

As MIT continues with its mission to train the greatest leaders of the future, it behooves us to bring awareness of global impacts in all dimensions, whether social, spiritual, or environmental, into the educational program. MIT's inception and continuing support of the Center for Ethics is a very encouraging step in this direction.

*Kai-yuh Hsiao is a member of the Class of 1999 and received his PhD in Media Arts and Sciences in 2007.*

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# CAMPUS LIFE

## 30 Minutes with Prof. Gregory C. Fu '85

An Interview by S. Campbell Proehl

**By S. Campbell Proehl**

CAMPUS LIFE COLUMNIST

*S. Campbell Proehl:* Your lab focuses on asymmetric synthesis and palladium-catalyzed coupling reactions. Could you put this into layman's terms for the general MIT population?

*Gregory C. Fu:* What we're interested in doing is developing new reactions for use in synthetic organic chemistry or organic synthesis, more broadly. So people want to be able to transform molecules of type A into molecules of type B. Oftentimes, there aren't good methods to do that, so we're trying to develop new reactions that will allow us to achieve new transformations — This would be most useful in the pharmaceutical industry. But the fact of the matter is that what we've done is also applied in materials science and biology, in order to make new compounds.

*TT:* I read that you were born in Galion, Ohio in 1963, which according to Wikipedia, had a population of 11,341 at the 2000 census, and was a stop on the Erie Railroad. Later on you moved to Virginia. Do you consider yourself a Midwesterner or a Virginian?

*GCF:* I consider myself a Midwesterner. I lived in Ohio and Missouri until I was fourteen. I think those were the formative years. I went to high school right outside D.C. in suburban Virginia, but I consider myself to have grown up as a Midwesterner.

*TT:* What meaning does that have for you?

*GCF:* I'm actually happy that I did so. Having lived for the last thirty-some years on the East and West Coast, I understand and appreciate many East and West Coast perspectives. I understand that the coasts think the Midwest is an inconvenient thing you have to fly over to get from one side to the other, but I think it's a great place to grow up. People are friendly, and the pace of life on average, at least where I lived, is a little bit slower, so in terms of a place to grow up, I think I sort of had the perfect experience. I think growing up in the Midwest is great, but at this stage, I actually prefer to live in Boston.

*TT:* And what did you do as a child? Were you a kid who did science experiments in your basement, or did you do normal kid things?

*GCF:* No, I usually just liked to go hiking; there were fields and such nearby. There was not too much science. I didn't really fall in love with Chemistry until my junior year in high school.

*TT:* Did your parents push you to go into science?

*GCF:* I would say they pushed me to go away from science. They viewed science as a little bit more of a speculative job situation. They wanted me to be an engineer. They felt that being an engineer would be a safe choice for my career prospects.

*TT:* Do you have any siblings?

*GCF:* I have one brother. He's a profes-

sor. He's an applied mathematician, but he's a professor at the business school at the University of Maryland. He was also an MIT undergraduate.

*TT:* How far apart were you?

*GCF:* He was one year ahead of me. But he stayed an extra year. He ended up double majoring and getting a master's [degree]. We graduated the same year. He got three degrees. I got one degree.

*TT:* What was MIT like back in 1985? Were there fewer women?

*GCF:* The number of women was significantly lower at that point. But I would say qualitatively it wasn't that different other than that. In terms of the growth of campus, [the Kendall area] and the Whitehead went up when I was an undergraduate. But in terms of the west side of campus, it's pretty much the same. I get the sense that undergraduate life is not that different.

*TT:* Where did you live?

*GCF:* I lived in MacGregor.

*TT:* Where did you guys eat back then? Was there a dining hall?

*GCF:* There was mandatory in-commons for people who lived in certain dorms, and so in MacGregor there was what they called a point plan. You had to use a certain number of points per semester, which amounted to a little more than half of one's meals, or you lost it. So you had some set fee that would pay for a significant fraction of your meals. People weren't highly enthusiastic about the quality of the dining options back then. I don't know how things have changed.

*TT:* There is a movement against the fascist principles of dining halls.

*GCF:* The feeling then was that they were good in terms of promoting community and so on. But it would have been better if the quality of the food had been more enticing.

*TT:* Being twenty years out from MIT — I hope that's not a scary figure — do you have any advice for students here now?

*GCF:* I don't know if anything that I've learned would be useful now. Like I said, I don't think the place has changed that much. One of the things I like about MIT is that people who come here don't expect a free ride. There are some of the elite schools where the

students have the attitude that the hard part is getting in and they expect to sort of coast for four years. One of the things I like about MIT undergraduates is that they come here expecting it to be tough and ready to work hard. Hopefully to play hard too, but definitely to work hard. It's not an entitlement attitude. I think that's good.

*TT:* When you look back, do you remember working really hard? Or has that faded now?

*GCF:* I remember working very hard. At that point (it seems less prevalent now), they had IHTFP t-shirts and so on, because it was a very demanding place and people often, at least at the point they were living through it, had mixed emotions. Most of us, when we look back, remember all of the good things, but when we were here, it was pretty intense and there were some people who weren't always happy. But when you talk to people now, they look back on that as a great learning experience and they think all the hard work was worth it.

*TT:* Do you think it made you who you are?

*GCF:* My guess is most people came in that way. It's a self-selective group of people who decide to come here and MIT certainly happens during the formative years. But I don't think it completely changes people. MIT attracts people who are predisposed in certain ways.

*TT:* What kind of extracurriculars did you do? Were you

mostly research-focused?

*GCF:* The thing that I loved the most was UROP. That was for me the most enjoyable thing. But I do like the fact that MIT is in a city. To me that made a big difference, that if you were tired of the academic scene, it was easy to escape, so to speak. I also did IMs. I played ping-pong, I did IM hockey, even though I hadn't skated before I came to MIT, I did bowling. There was actually a bowling alley in the basement of the student center. They also had pool, basketball, football. I think I played in one or two of those games, but I didn't pay football regularly. Table tennis was probably my favorite.

*TT:* You did your undergraduate research under Barry Sharpless, who won the 2001 Nobel Prize in Chemistry for his work with stereoselective oxidation reactions. Later on, you were a postdoc under Robert Grubbs, who shared the 2005 prize with MIT's Richard Schrock. What does it feel like when your boss wins the Nobel Prize?

*GCF:* That's actually very interesting. It's kind of cool.

*TT:* How did you find out? Did you wake up and see it in the newspaper?

*GCF:* In 2001, I saw it on the web, actually. I knew which day it was going to be so it was announced and I just happened to check the Nobel website and it popped up. Barry told me afterwards that I was the second person to shoot him an e-mail congratulating him.

*TT:* Do you have a hand in the work for either of the prizes?

*GCF:* With Sharpless, I played zero role. But in the case of Grubbs, I actually did play a role in terms of what I did as a postdoc.

*TT:* That has to feel really great.

*GCF:* It's interesting though, because I always say that that was the high point of my scientific career, to be participating in something for which at least part of the work was recognized for the Nobel Prize, because most people go through their entire career and at places like MIT, they obviously have a significant contribution, but they're not doing work that's directly associated with the Nobel Prize. So again, not to say that my work was the work that went into the Nobel Prize, but it was part of the program.

*TT:* I think it's fair to give yourself credit. What do you do in your spare time?

*GCF:* That's a good question. Not a whole lot right now. I'll occasionally go see a Red Sox game. I probably have a 38-year streak of seeing at least one Red Sox game — I think since my freshman year here. When I was a postdoc at Caltech, I used to go to see the Angels play the Red Sox. In terms of sports, they're probably my favorite team.

*TT:* Can I ask you how many hours a week you spend in the office? Or checking in on the lab?

*GCF:* Not that much time around the lab anymore. I give the students a fair amount of latitude to do what they want. But in terms of how many hours I spend in the office, I don't know. Seventy? Eighty? It's hard to say.

*TT:* That's dedication. That's serious dedication.

*GCF:* Well, it's one of those things. Many people aren't so fortunate. If you like what you do, it's not work. So, coming in on weekends isn't a chore if you really, really love what you do. I know a lot of people who sort of work just to pay the bills and to me that would be a frustrating life. I think I'm extraordinarily lucky because work is fun for me. It's not a chore. So working more than eight hours a day or working on weekends isn't a bad thing. It's not something I dread.

*TT:* That's an incredible luxury, to love what you do that much.

*TT:* And last, what's your favorite molecule?

*GCF:* That's an interesting question. I don't know, maybe water. It's an interesting molecule because of its hydrogen bonding properties. And it's such a simple molecule, too, so it's relatively unique.

*TT:* That's a far simpler answer than I would have expected.

*GCF:* There are some very interesting large biomolecules, but water is a basic molecule and yet so important in terms of our everyday existence.

*TT:* Mine is isoamyl acetate.

*GCF:* Oh.

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# Talk Nerdy To Me

## Too Many Numbers

By Christine Yu

STAFF COLUMNIST

MIT is full of numbers, from buildings to classes. We're surrounded by them. Who doesn't associate with some form of numbers? There are the ones that we always remember: our course numbers, our phone numbers, and our student ID numbers. And then, there are numbers that we choose to forget, like our "count."

"What's your number?" is a question that I've been asked quite a bit these days. And, they're never referring to the friendly seven-digit phone-number. Generally, I respond with, "What counts?"

First-base? Second-base? Third-base? There are men that always count, but what about the ones that didn't make it full circle? Is he worth half a point if he didn't cum from sex? Like, you went dry, and he went soft simultaneously,

thanks to whatever liquor you had. What if you can't remember thanks to one too many shots of 151? Do you add him in as a precaution, or do you call it "rape?" Then, what about oral sex? What if he didn't cum again? And I always wonder how anal-sex and other out-of-the-ordinary acts, like threesomes, are weighted.

I've read so many reports of teens engaging in anal sex to preserve their virginity. Personally, while I respect decisions regarding sex, I fully believe virginity is overrated. Going to such an extreme length to "keep" it baffles me.

Numbers are misleading. People decide for themselves what "counts." For a while, I kept an Excel spreadsheet of past hookups, but whenever I admitted the fact, people always assumed the worst. I just wanted to keep a record of my intimate life, noting trends, like my pre-

dilection for Course 15s. This isn't to say that I wasn't afflicted with what my friend Milena calls "fratskank" syndrome at some point in my MIT career. But my spreadsheet isn't even a full page — then again, I guess that's a loaded statement, because I can easily change the font. Really, though, my count is no one's business. It's unimportant — what matters more is that I'm clean and healthy.

Out of the twenty sexually active MIT friends of mine that I asked, half guys, half girls, only one admitted to getting regular STD tests. The others either insisted that they used a condom every time, or they somehow knew their partners were "clean." Regardless, that's a disturbing statistic, especially given the fact that STD tests are confidential and free from MIT Medical. If you're going to promiscuous, you should at least be safe about it. A number is

not indicative of a responsible sexual partner.

Of course, it's only natural to be curious about a partner's history, particularly in the context of a relationship. However, when a relationship gains that level of trust, there's always a story behind every number. The numbers become people, and then they might seem more daunting. It's key to remember that everyone has a past, and the person you like in the present wouldn't be the same without that past.

Some numbers are important at MIT — particularly on certain tests — but then there are numbers that are just that — numbers. It seems to me that most people believe that men "overcount" and women "undercount." If you're going based off just a number, you should assume some manipulation. The story behind the count — especially what people learned from it — is much more important to who we are sexually.

# I've Got Brouhaha Rhythm

## I've Got Music

By Michael T. Lin

CAMPUS LIFE EDITOR

I like going to plays and theatre shows. It makes me feel cultured, the same way that going to movies makes me feel social and going to wild parties makes me feel sullied and vulnerable. I've always had an appreciation for the theatre, if only because it's one of the most genuine forms of narrative entertainment out there. No CGI, no take two, no lip-syncing. There's a great deal of appeal in the knowledge that each performance is unique, that the performers are walking and/or doing their high-kicks on a tightrope without the safety net of an editing room or stunt double.

Saturday Night Live comes close to the same notion, but as a purist of the entertainment experience, I'm of the school of thought that a real stage with real physical proximity (nosebleed seats or not) always wins out over

a television set. Considering how much people shell out for live seats to television tapings, I'm clearly not the only person who thinks so. And now, in an intriguing twist, I'm soon to be among those walking the tightrope.

I haven't done anything remotely theatre-like in front of an audience since the fifth grade, and as much as I enjoyed playing Aesop the Sportscaster (don't ask), I hadn't really envisioned acting to be something I would do in my quasi-adult life. Yet, as the powers that be would have it, be they luck, fate, or several weeks of not-entirely-unwanted peer pressure, I'm going to be in a show this week. And not just a show, a musical. (Dun dun dunnn.) Next Act, Next House's annual musical theater show, is putting on a production of *Sweet Charity*. It opens thus Thursday at Next House, and I get to be a part of it.

Let's be perfectly clear: I have no pretensions to being what one might consider a theatre person (that's more within my girlfriend's purview). I consider myself an above-average dancer in that I've never hospitalized a dance partner with a foot injury, but I wouldn't peg my acting abilities anywhere above *Titanic*-era Leonardo DiCaprio unless told so by someone with a proper frame of reference. I also lack Leo's teen girl heartthrob factor that doubles ticket sales on sight (also known as the "Orlando Bloom Effect"). And on top of all that, my one attempt in public karaoke ended in disaster and a snarky DJ telling me that my boxers weren't tight enough for Orleans' "Still The One." Not my proudest moment, especially considering that it was early enough in the evening that most of the onlookers were sober.

So why am I in Next Act? Well, for one thing, rehearsal is only three flights of stairs away, and for another, the time-sink factor isn't

quite as severe as with other on-campus theatre productions. Mind you, it's still been pretty severe, but at least so far, it's been something to de-stress with. The cast and crew are good folk, and it's always fun to pretend to be somebody else without violating federal law.

And more than that, the thought of being in the spotlight as more than the Third Billy Goat has me twitching with anticipation. Granted, First Young Man isn't all that much more ambitious. But, given how talented the rest of the cast is, it's only fair, and I'm more than happy to watch them work. So, yeah — Next Act opens Thursday, 8 p.m., three nights only, free admission, bring your friends and prefrosh. Now, if you'll excuse me, I really should be going. Dress rehearsal starts tonight, and I need to patch up my jeans if my pothead-meets-lounge-lizard costume is to be ready in time. (You know you're intrigued.)



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# Steal My Comic

by Michael Ciuffo



# The Daily Blunderbuss

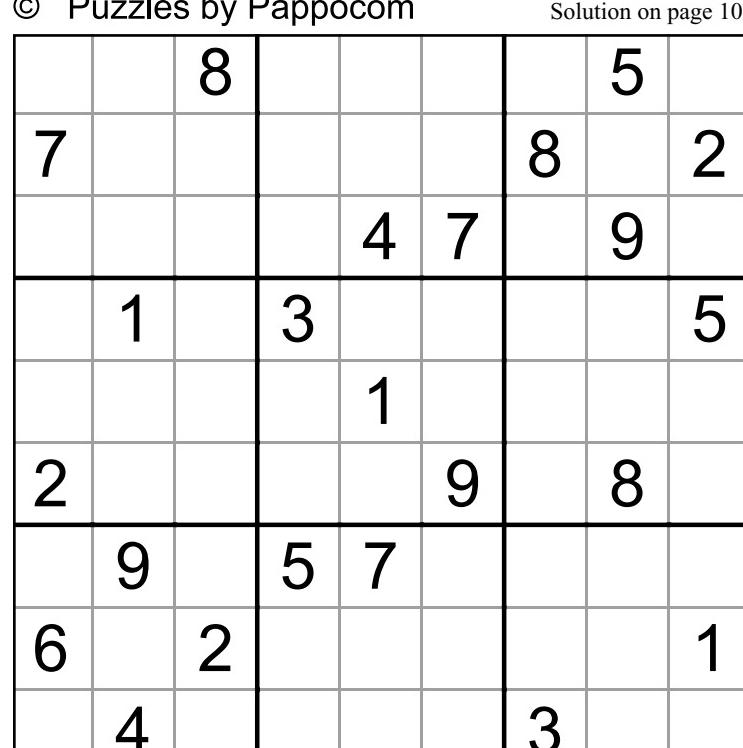
by Ben Peters

# **su | do | ku**

**Instructions:** Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.



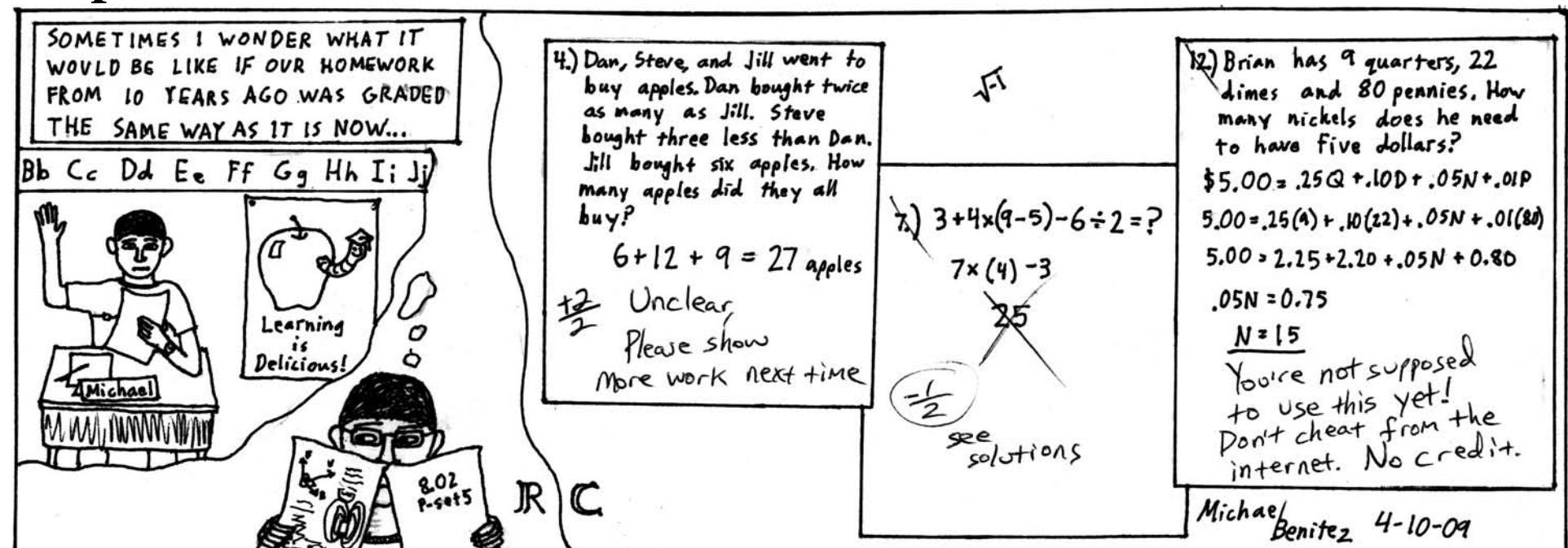
Jun 2007



Solution, tips, and computer program at <http://www.sudoku.com>

# Help Desk

by Michael Benitez



Join *The Tech* and see your comic here!

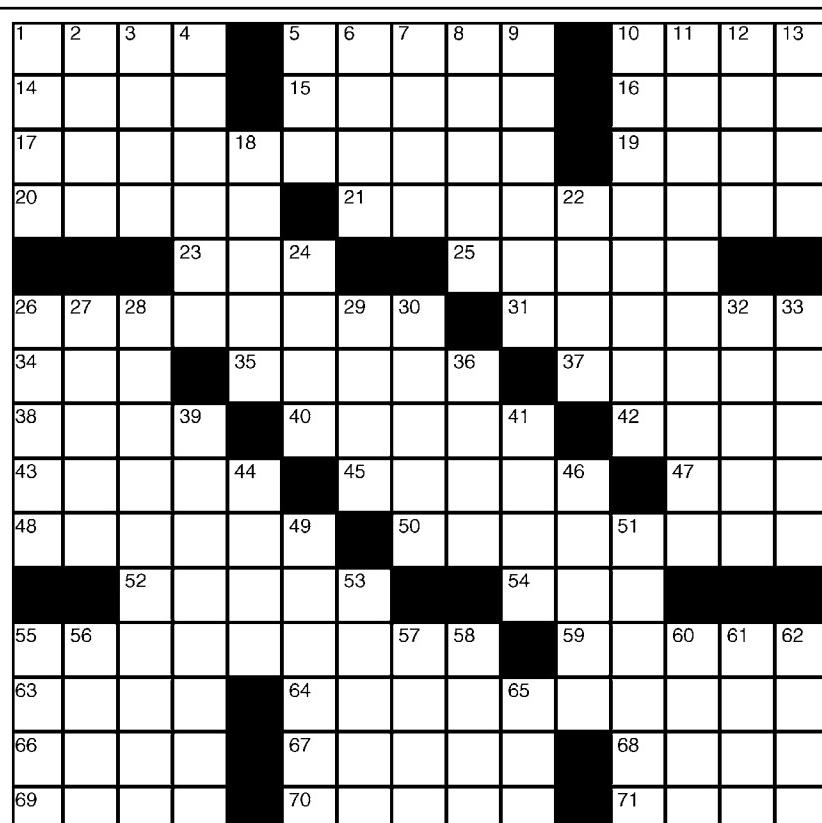
*join@tech.mit.edu*

**Doonesbury**

BY GARRY TRUDEAU

**Dilbert® by Scott Adams****Crossword Puzzle**  
**Solution, page 10**

ACROSS	40 Substructure for plaster	71 Darling	29 Lab gel
1 Ooze	42 Bachelor party	30 Musical units	32 Backspace
5 World-weary	43 God of Islam	31 Old adages	33 Kingly
10 Booty	45 Packs of paper	2 Merit	36 O'Neal of
14 Rhine tributary	47 NASA's ISS	3 Canal of song	basketball
15 "Waterloo Bridge" painter	partner	4 Former Spanish	39 Identifiable
16 Miami or Lima location	48 Appeared	coin	41 Self-satisfied
17 Banded	50 Arboreal rodent	5 Autobahn auto	44 Make well
timepiece	52 Dresses in	6 Fertile soil	46 Tendon
19 Mythical queen of Carthage	54 Wildebeest	7 Against	49 Southern
20 Express disdain	55 Nasal sprays	8 Religious	accents
21 Became milder	59 Test	groups	51 Charged a
23 Wee lad	composition	9 Principles of	quarterback
25 Land or sea	63 Leopold's	conduct	53 Honker
follower	partner in crime	10 Soft drinks	55 Ingrid in
26 Maui man	64 Beneficial	11 Rapids	"Casablanca"
31 Not so fast	66 Light, granite	12 Right-hand man	56 Black as nuit?
34 Expression of	rock	13 Yummy	57 Loyal
disgust	67 "Taxi"	18 Follow a scent	58 Move slightly
35 Former capital	dispatcher	22 Dames	60 Stable parent
of Nigeria	68 Humorist	24 Ivory rival	61 Operatic
37 Trunk tire	Bombeck	26 Hawaiian	soprano Gluck
38 Serengeti stalker	69 Johnson of	dances	62 Birthday
	"Laugh-In"	27 Limber	separation
	70 Violinist Isaac	28 Sandwich bread	65 Coop cackler



# Browner: Bush Admin. Made Little Headway Against Climate Issues

**Clean Energy**, from Page 1

er harkened back to previous environmental crises, pointing out that after Congress passed regulations governing pollutants, industry was usually able to adapt to the regulations quickly despite the expected costs.

Browner, Holdren, and Markey often seemed frustrated with the lack of progress during the Bush administration on regulating greenhouse gases.

As EPA administrator in the

1990s, Browner prepared a legal argument supporting a role for the EPA in regulating carbon-dioxide emissions under the Clean Air Act. These documents were discarded by the most recent Bush administration, and it took the 2007 Supreme Court decision in *Massachusetts v. EPA* to establish the EPA's obligation to regulate these emissions.

Browner said, however, that she would much rather see carbon-dioxide regulation come from the legislative branch and supports Markey's efforts toward this goal.

**Solution to Sudoku**

from page 8

9	6	8	1	2	3	4	5	7
7	3	4	6	9	5	8	1	2
1	2	5	8	4	7	6	9	3
4	1	9	3	6	8	7	2	5
8	5	6	7	1	2	9	3	4
2	7	3	4	5	9	1	8	6
3	9	1	5	7	6	2	4	8
6	8	2	9	3	4	5	7	1
5	4	7	2	8	1	3	6	9

**Solution to Crossword**

from page 9

S	E	E	P	B	L	A	S	E	S	W	A	G
A	A	R	E	M	O	N	E	T	O	H	I	O
W	R	I	S	T	W	A	T	C	H	D	I	D
S	N	E	E	R	M	I	T	I	G	A	T	E
T	A	D		S	C	A	P	E				
H	A	W	A	I	I	A	N	S	L	O	W	E
U	G	H	L	A	G	O	S	P	R	A	E	R
L	I	O	N	L	A	T	H	S	S	T	A	G
A	L	L	A	H	R	E	A	M	S	E	S	A
S	E	E	M	E	D	S	Q	U	I	R	R	E
W	E	A	R	S		G	N	U				
I	N	H	A	L	A	T	S	E	S	S	A	Y
L	O	E	B		W	O	R	T	H	W	H	I
S	I	A	L		L	O	U	I	E	E	R	M
A	R	T	E		S	T	R	N	D	E	A	R

The Lebanese Club at MIT presents...



# Beavernappers Seek Reprieve for Varsity Sports That Will Be Cut

**Tim the Beaver**, from Page 1

by the Campus Activities Complex, which rents the costume to student groups and departments for events. According to the CAC website, the replacement cost for the suit is \$7,000.

The kidnappers do not plan to damage the costume. "The goal of it is to raise awareness of the issue, to both alumni and faculty," they said. "The only way we can make a difference is to get community pressure on the administration."

The kidnappers also said that this was another case of the administration not listening to students and making decisions without student input.

Most students on campus first became aware that Tim was taken on Monday afternoon, after one of the kidnappers sent an e-mail to a series of dorm discussion lists. Student reaction to the theft was largely negative with students saying that the theft seemed an ineffective form of protest.

The reaction of Anthony D. Rindone '10 typified that of many students who chimed in on e-mail threads across campus. "It's pretty silly," he said in an interview last night.

The beaver theft sends an ineffec-

tive message of "unless you comply with our demands, we're gonna take away an important part of marketing to freshmen," he said.

"We don't want to be ... quick to do some irrational thing whenever something we don't like comes up," he said.

But a few other students said

## Note from Kidnappers

MIT,

We have taken Tim the Beaver hostage. We assure you that he is safe, but he will not be returned until our voices are heard, until varsity athletics serves the ENTIRE student body, and until all 41 varsity sports are guaranteed a home at MIT.

The Kidnappers

that the "beavernapping" was just a funny stunt that sent MIT a serious message.

Hiroyuki G. Yamada '11 heard about the theft on Saturday afternoon from a gymnast friend who mentioned seeing the theft at the Beaver Bowl event.

The ransom demands probably won't be met, Yamada said. "It's a

\$7,000 beaver suit and ... a million and a half dollars has to come from somewhere," referring to DAPER's three-year budget cut target.

Still, it was obvious to him that the ransom wasn't serious — he viewed the kidnapping as a fun joke, he said.

"It made some people laugh, and it made some people smile, and that's what you need in a time when a lot of people are on the edge," he said.

UA President Noah S. Jessop '09 has been involved in talks with the administration regarding the budget cuts.

"Unfortunately, you can't cut \$150 million without someone losing something they like," said Jessop. "We should hope the Institute is being creative."

The \$150-million cut refers to the Institute-wide plan to reduce expenses over the next three years.

While athletics is one of many areas being cut, Jessop reiterated that the Institute has stood by its promise to not cut financial aid.

"We might be worried about losing the things we do, but at least we don't lose the people we do them with," said Jessop.

Michael McGraw-Herdeg contributed to the reporting of this article.

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# Police Log

The following incidents were reported to the MIT Police between Jan. 16, 2009 and Mar. 21, 2009. This summary does not include incidents such as false alarms, general service calls, or medical shuttles.

- Jan. 16:** W20 (84 Mass. Ave.), 2:18 a.m., Graffiti reported.  
**Jan. 20:** W20 (84 Mass. Ave.), 1:56 a.m., Larceny of pocket book and other items.  
 NW30 (240 Albany St.), 3:14 a.m., Arrest of Harold Alvarez and Angel Dejesuses, 240 Albany St., Cambridge, Mass. Arrested for receipt of stolen property.  
 416 Beacon St., 7:56 p.m., Laptop stolen.  
**Jan. 22:** 32 (32 Vassar St.), 10:45 a.m., Graffiti reported.  
**Jan. 23:** PKT (299 Commonwealth Ave.), 7:19 p.m., Larceny of cell phone.  
**Jan. 24:** NW10 (143 Albany St.), 3:05 a.m., Theft of couch cushions.  
**Jan. 26:** 54 (21 Rear Ames St.), 9:53 a.m., Past larceny of computer parts.  
 E52 (50 Memorial Dr.), 5:53 p.m., Theft of cell phone.  
 W32 (Vassar St.), 10:08 p.m., Wallet stolen.  
**Jan. 28:** E52 (50 Memorial Dr.), 8:57 a.m., Past larceny of Treo (smartphone).  
**Jan. 29:** W91 (570 Memorial Dr.), 6:20 p.m., Vehicle window smashed and GPS stolen.  
 W20 (84 Mass. Ave.), 8:08 p.m., Assist to Cambridge Police in recovering stolen vehicle.  
 E51 (70 Memorial Dr.), 10:41 p.m., Coat stolen.  
 M6 (182 Rear Memorial Dr.), 11:53 p.m., Laptop stolen from hallway.  
**Jan. 30:** NE48 (700 Tech. Sq.), 12:14 p.m., Report of counterfeit bill from MIT FCU.  
**Jan. 31:** W31 (120 Mass. Ave.), 5:34 p.m., Assault amongst basketball players.  
**Feb. 1:** W20 (84 Mass. Ave.), 3:31 p.m., Report of shoplifting. Arrest of Rudolph Knight on an outstanding warrant.  
**Feb. 2:** 139 Mass. Ave., 2:56 a.m., Window cut out of Jeep.  
 14 (160 Memorial Dr.), 12:21 p.m., Larceny of iPod.  
 32 (32 Vassar St.), 10:31 p.m., Laptop stolen.  
**Feb. 5:** W89 (291 Vassar St.), 4:37 p.m., Laptop stolen.  
 M32 (32 Vassar St.), 5:25 p.m., Laptop stolen from locked office.  
**Feb. 6:** DKE (403 Memorial Dr.), 9:44 a.m., Cash and Wii games stolen.  
**Feb. 9:** 35 (127 Mass. Ave.), 10:06 a.m., Camera stolen.  
 W20 (84 Mass. Ave.), 1:25 p.m., Larceny of wallet.  
**Feb. 10:** W61 (450 Memorial Drive), 8:05 p.m., Laptop stolen from room.  
**Feb. 13:** NW86 (70 Pacific St.), 2:05 p.m., Report of fraud by check.  
 NE49 (600 Tech. Sq.), 4:28 p.m., Attempted fraud by check.  
**Feb. 17:** W20 (84 Mass. Ave.), 9:40 a.m., Report of suspicious individuals. Lonnie Raleigh, 144 Worcester St., Boston, MA arrested on an outstanding warrant.  
**Feb. 18:** 32 (32 Vassar St.), 2:36 p.m., Laptop stolen.  
 10 (122 Memorial Dr.), 11:45 p.m., Suspicious person. Benson Brutus, 97 Jensen Rd., Watertown, Mass. arrested on outstanding warrant.  
**Feb. 19:** W89 (291 Vassar St.), 5:29 a.m., Report of assault.  
**Feb. 21:** W35 (100 Vassar St.), 4:47 p.m., Theft of tennis shoes.  
**Feb. 22:** W20 (84 Mass. Ave.), 2:09 p.m., Report of past unarmed robbery on Vassar St.  
 E15 (20 Ames St.), 2:25 p.m., Unarmed robbery reported.  
**Feb. 23:** E40 (1 Amherst St.), 9:25 a.m., Laptop stolen.  
**Feb. 24:** 7 (77 Mass. Ave.), 9:15 a.m., Report of harassing telephone calls.  
**Feb. 25:** E19 (400 Main St.), 9:36 a.m., Report of male punching female outside of building. No arrests made.  
**Mar. 3:** 12 (77 Mass. Ave.), 9:02 a.m., Report of MIT ID lost or stolen.  
**Mar. 4:** W84 (550 Memorial Dr.), 6:48 a.m., Report of past vehicle break-in.  
 W34 (120 Vassar St.), 7:29 p.m., Locker articles stolen.  
**Mar. 6:** W51 (410 Memorial Dr.), 1:32 p.m., Larceny of wallet and purse.  
 50 (142 Memorial Dr.), 4:23 p.m., Report of hateful graffiti in bathroom.  
**Mar. 7:** W84 (550 Memorial Dr.), 3:14 p.m., Larceny of bicycle.  
**Mar. 8:** 14 (160 Memorial Dr.), 3:32 p.m., Arrest of John Bisese for larceny and trespassing.  
**Mar. 10:** E52 (50 Memorial Dr.), 10:26 a.m., Theft of laptop.  
 10 (122 Memorial Dr.), 4:01 p.m., David Scrima, 159 East 44th St., New York, NY arrested for trespassing after notice.  
**Mar. 11:** W20 (84 Mass. Ave.), 9:44 p.m., Woman on bicycle robbed.  
**Mar. 13:** West Garage Annex, 5:40 p.m., Vehicle break-in, purse stolen.  
 W45 (125 Vassar St.), 6:57 p.m., Report of vandalism to vehicle.  
**Mar. 15:** W34 (120 Vassar St.), Theft of items from women's locker room.  
 W35 (100 Vassar St.), 11:11 p.m., Reports of harassing telephone calls.  
**Mar. 17:** 290 Main St., 9:48 a.m., Assist to Cambridge Police in apprehension of suspect who stole money bag.  
 W20 (84 Mass. Ave.), 1:38 p.m., Arrest of Ginger Duncan, 341 Broadway, Cambridge, Mass. on outstanding warrant. Disorderly person and resisting arrest.  
**Mar. 18:** W20 (84 Mass. Ave.), 12:01 a.m., Report of copies of *The Tech* thrown into recycling bin.  
**Mar. 20:** TEP (253 Commonwealth Ave.), 2:07 a.m., Report of past theft of laptop and backpack.  
 TEP (253 Commonwealth Ave.), 2:13 a.m., Report of past theft of laptop.  
 W61 (450 Memorial Dr.), 12:01 p.m., Larceny of wallet.

COMPILED BY PEARLE LIPINSKI

# MIT Astronaut Has Maintained Hubble Telescope for 18 Years

**Hubble**, from Page 1

said in a recent interview. But, he added, "I don't think anybody could ever prepare themselves for, you know, trying to bury something that they have said, 'Hey, this is worth risking my life for.'

He went home that January night and wondered whether he should resign.

Five years later, Grunsfeld reported for work at an 11 million-gallon indoor pool near the Johnson Space Center in his long underwear and a red baseball cap bearing an image of Curious George in a spacesuit. The pool's blue depths contained sunken replicas of the Hubble and the International Space Station. Surrounded by divers and helpers, Grunsfeld squirmed into a 400-pound set of overalls known as a spacesuit. He was preparing to practice for his return to space.

On May 12, he and six other astronauts commanded by Scott Altman are scheduled to ride to the telescope's rescue one last time aboard the shuttle Atlantis. This will be the fifth and last time astronauts visit Hubble. When the telescope's batteries and gyros finally run out of juice sometime in the middle of the next decade, NASA plans to send a rocket and drop it into the ocean.

If all goes well in what Grunsfeld described as "brain surgery" in space, Hubble will be left at the apex of its scientific capability.

As chief Hubble repairman for the past 18 years, he has been intertwined with the Hubble telescope physically, as well as intellectually and emotionally.

"He might be the only person on Earth who has observed with Hubble and touched Hubble," said

Bruce Margon, an astronomer at the University of California, Santa Cruz, and former deputy director of the Space Telescope Science Institute.

Last September, Grunsfeld and his crewmates were two weeks from blasting off for Hubble when a data router failed, shutting down the telescope until a backup could be booted up. The servicing mission was postponed so that NASA could prepare a replacement router, adding another degree of difficulty to an already crowded and high-stakes agenda.

To accommodate installing the new router, mission planners had to cut into the time allotted for the repair and resurrection of Hubble's main camera, the Advanced Camera for Surveys. That repair was originally scheduled over two spacewalks, and now planners are hoping to be able to do it a few hours on one spacewalk.

If it cannot be done, Grunsfeld said grimly, the pictures that have inspired people around the world, pinpointed planets around other stars and helped investigate the fate of a cosmos dominated by dark energy will be lost.

If anybody is up to the challenge, it seems to be Grunsfeld, who will be making his fifth trip to space.

Michael Turner, a cosmologist and former colleague at the University of Chicago, described Grunsfeld's career as "Mr. Smith goes to space." He said: "Everything turns to magic even when things go bad. In the end it gets righted, and he gets to lead the team."

Grunsfeld's whole life has led to Hubble. Born in Chicago in 1958 into a family of architects — his grandfather designed the Adler Planetarium

— Grunsfeld said he yearned from age 6 to be an astronaut. Science soon beckoned as an alternative. By the time he reached college at the Massachusetts Institute of Technology, his interests were centered on physics and cosmology. To make some money as an undergraduate, he took a job for \$4 an hour on the graveyard shift in the control room for a small satellite, known as Sas-3, which was observing X-rays. Sometimes he took his dates there.

The job led to a year in Tokyo, where Grunsfeld lived in a Zen monastery, meditating in the morning, and teaching and working with an X-ray astronomer, Minoru Oda, at the University of Tokyo in the afternoon. When he came home early one day and found the monks playing baseball, a spell was broken.

Grunsfeld returned to Chicago to earn a doctorate conducting cosmic ray research at the University of Chicago. Along the way he married a woman he had known in high school, Carol Schiff. They now have two children, and she is an accountant at the Johnson Space Center.

Grunsfeld then took a job at the California Institute of Technology, and he and his wife both learned to fly.

When NASA invited Grunsfeld to an interview in 1991, Grunsfeld flew his own plane to Houston.

On his first spaceflight, a 16-day mission in 1995 tending a suite of small telescopes, Grunsfeld did not want to come down. "I had this real feeling of peace, you know, that I never had here on planet Earth."

Grunsfeld went up again on a 10-day mission to the Mir space station, in 1997.

Then, he said, "I got lucky and got assigned to Hubble."

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Ran

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Shostakovich

Piano Trio No. 2 in E minor, Op. 67

### Boston Chamber Music Society: Haydn, Beethoven & Brahms

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Wilhelmina Smith, cello

Ida Levin, violin

Mihae Lee, piano

Marcus Thompson, viola

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Geoffrey Gordon

Shock Diamonds

Thomas Oboe Lee

"...bisbigliando..."

Eric Moe

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# SPORTS

## Taekwondo Wins Tournament At Penn, Maintains ECTC Lead

By Tara Sarathi  
TEAM MEMBER

On Saturday, April 4, the MIT Sport Taekwondo team travelled to the University of Pennsylvania to compete in the fourth Eastern Collegiate Taekwondo Conference (ECTC) tournament of the year. This tournament was a crucial for the team, since a loss could mean the loss of the long aspired-for ECTC cup to the rival team from Cornell University. Despite being outnumbered by the team from Cornell, MIT's team — coached by head instructor Dan Chuang and led by captains Christopher J. Han '09 and Corinna Hui '09 — finished first.

The team's passion was displayed from the beginning as the day opened with the forms competition. In the black belt division, Daniel J. Sauza '11 claimed the silver medal while Erika Lee '12 captured the bronze.

In red belt forms, Ning Wu G took the bronze in the men's division, while once again, the wom-

en's forms was dominated by an outstanding performance by MIT, with Christine M. Lee '09, Shammi S. Quddus '10, and Ranel F. Sun '10 capturing the gold, silver, and bronze respectively.

For the intermediate belts, Rafael A. "Maverick" Raya '11 claimed the silver in blue belt forms, while Teresa T. "Ty" Lin '12 and Lyla J. Fischer '11 demonstrated their prowess by taking the silver and bronze, respectively, in the green belt division.

After a promising morning, the team refused to ease up on the competition, especially against Cornell. The afternoon opened with sparring.

In the A team division, the men's A1 (Wu, Han, Forrest W. Liau G) muscled their way to the medal stands to claim the bronze for the first time since 2007. The women's A1 team (Quddus, Hui, Christine Chin '09) powered their way to the top for the gold, and A2 team (Sun, Han Zhu '09, Stephanie E. Nix '09) aggressively sparred their oppo-

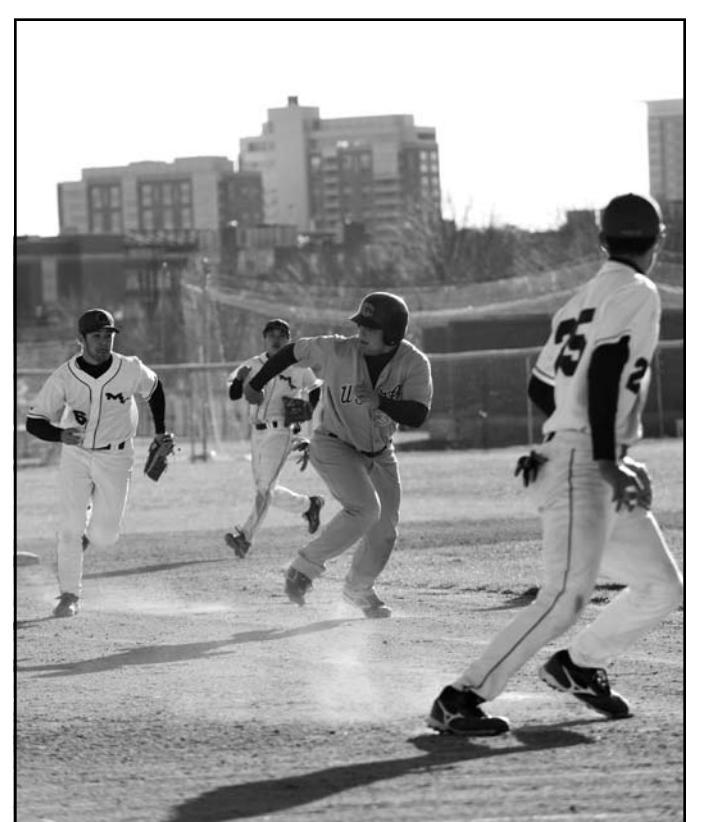
nents for the bronze.

In Division B sparring, the women's team made history and dominated their division. The B1 team (Quddus, Zhu, Chin) snatched the gold, B2 (Sun, Nix, Fischer) captured the silver, and B3 (Jing "Jenny" Cheng '11, Lee, Hsin-Jung "Sophia" Li '11) and B4 (Tara P. Sarathi '12, ZheChen "Mary" Hong '10, Lin) seized the bronze.

Even in the C team division, the desire to win was never diminished. The men's C1 team (Ryan A. Rosario '12, David Y. Wen '10, Ijeoma "EJ" Emeagwali '12) sparred fiercely and left the ring with the gold.

As the tournament came to an end, the team walked away knowing that the goal of the day was accomplished: beating Cornell and retaining the hard-earned lead in the league.

Only one tournament stands in the way of winning the ECTC cup: with only two weeks left before the Columbia University tournament on April 25th, the team is training harder than before.

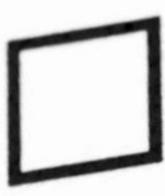


CHELSEA GRIMM—THE TECH

**Bryan A. Macomber '12 (left) and Kenneth M. Lin '12 of the MIT baseball team catch US Coast Guard Academy's Brian Yurovich in a rundown between the second and third bases, ultimately tagging him out in the second game of Monday's double-header on Brigg's Field. The Engineers won both games with scores of 18-1 and 7-4, respectively.**

## Coop Student Board of Directors Election Update

The following student Coop members are candidates for the Board of Directors for the 2009-2010 academic year.



**MIT Undergraduate Students:**  
Hattie Chung 2011  
Naisi Gao 2011

**MIT Graduate Students:**  
Tanguy Chau 2011  
Loreenna Lee-Houghton 2011  
Paul Romano 2011

**Harvard Undergraduate Students:**  
Melissa Oppenheim 2012  
Edmund Soriano 2011  
George Thamby 2010  
Danni Xie 2012

**Harvard Graduate Students:**  
Aaron Chadbourne 2011  
Luke Fuszard 2010  
Johanna Wightman 2010



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April 6 Through April 27



## Know lots about sports?

Lay down the facts about MIT Athletics!  
Write for the Sports Section.  
[join@tech.mit.edu](mailto:join@tech.mit.edu)

## UPCOMING HOME EVENTS

**Tuesday, April 14, 2009**

Baseball vs. U.S. Coast Guard Academy	2 p.m., Briggs Field
Baseball vs. U.S. Coast Guard Academy	4:30 p.m., Briggs Field

**Wednesday, April 15, 2009**

Men's Tennis vs. Brandeis University	3 p.m., duPont Tennis Courts
Baseball vs. Springfield College	3:30 p.m., Briggs Field

**Thursday, April 16, 2009**

Baseball vs. Eastern Nazarene College	3:30 p.m., Briggs Field
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## SCOREBOARD

### Baseball

**Friday, March 10, 2009**

MIT (12-8)	10
Springfield College (6-18)	4

### Women's Openweight Crew

**Saturday, March 11, 2009**

George Washington Invitational	MIT
	1st of 3

### Men's Lacrosse

**Saturday, March 11, 2009**

Babson College (3-8)	3
MIT (5-5)	4

### Women's Lacrosse

**Saturday, March 11, 2009**

MIT (7-3)	17
Smith College (2-7)	2

### Softball

**Friday, March 10, 2009**

MIT (5-13)	1
Wheaton College (12-17)	9
MIT (5-14)	1
Wheaton College (13-17)	11

### Men's Tennis

**Saturday, March 11, 2009**

Coast Guard Academy (6-7)	0
MIT (10-1)	9

### Men's Track and Field

**Saturday, March 11, 2009**

Bates, Colby, and Southern Maine	MIT
	2nd of 4

### Women's Track and Field

**Saturday, March 11, 2009**

Bates, Colby, and Southern Maine	MIT
	1st of 3